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TIPS

ON COST REDUCTION

for SUPERVISORS

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from the Assistant Secretary for Administration

U. S. Department of Agriculture—Washington, D. C. 20250

February 1967

NOTE TO SUPERVISORS:

Good leadership is the key to successful operation. The supervisor's role is to provide that leadership.

He is successful to the extent that he knows and uses effective methods to improve performance. These methods comprise management skills to be cultivated by supervisors for their own improvement.

We all recognize that well-understood objectives tend to build team spirit. We appreciate a "boss" who is fair and considerate, genuinely interested in each team member as a person. We expect, too, on-the-job know-how in terms of procedure, work distribution, planning and control.

The "Tips" in this publication invite action at every level of management:

1. By individual supervisors to bring about better operating performance;
2. By program directors (heads of divisions and State offices) to promote management proficiency in subordinate units of organization;
3. By agency heads to give the leadership proper to their positions.

The management skills outlined here are suitable material for training programs. Under a planned schedule, they can be a focus for concerted action.

I'm convinced these tested methods can be applied throughout the Department. I hope we have the energy and will to put them into practice. Supervisors must lead the way.

Let's go forward with this philosophy to achieve in 1967 the improved public service which is our goal.

Joseph M. Robertson

Joseph M. Robertson
Assistant Secretary for
Administration



Why a Cost Reduction Program?

As a supervisor you have heard a great deal about cost reduction recently. You have been urged to "stretch dollars"—"manage with economy"—"simplify work"—"increase output"—"set goals"—"report savings."

Is this just a special "push?" The answer is an emphatic "no." It is a Presidential program. You have the Secretary's assurance that the USDA Cost Reduction and Operations Improvement Program (to use its official name) is not a one-time "push." His interest in it is not an effort any of us as Americans would really want to "let up" on.



Is It Anything New?

The Department of Agriculture is an old hand at reducing costs. You have heard that “food is a bargain.” Why is this? It is because the research and action programs of the USDA over the years have been directed toward maintaining a strong and *efficient* agriculture. We have always been involved in searching for the better, the more economical way on behalf of our customers—farmers, consumers, and the taxpaying American public.

This view has influenced internal management of the USDA. We have pioneered in more effective and efficient personnel and financial management, in the use of computers, in the development of new methods and procedures, and in many, many other areas of administrative management.

We Don't Always Collect on “Efficiency”

Nothing stands still—particularly management. Subtle changes occur in work—changes which we, as managers and supervisors, sometimes fail to discern because they happen so gradually.

An employee usually gets better at doing any given job through experience. Sometimes, however, time is used to “embellish” a job or task. Parkinson, in his “Parkinson’s Law and Other Studies in Administration,” put it this way—“Work expands so as to fill the time available for its completion.”

If left on his own, an employee may use the time he gradually saves through experience, to perfect his

tasks out of proportion to the total job to be done. His good intentions may be misdirected. He may use time saved to build a wall of security around his job, or to become unnecessarily “expert.”

What we have noted about individuals in an organization appears also to be true of the organization itself. In his book “Administrative Vitality,” Marshall Dimock wrote “Vitality in institutions, as in all physical organisms, depends on how well the mechanism responds to the aging process and to environmental change.”

Cost reduction and operations improvement are related to change. In many cases we are confronted with outmoded ways of doing things or responses to demands that, if we examine the facts, may no longer exist.



What You as a Supervisor Can Do

You no doubt are asking “why do I need all this to get cost reduction going in my organization.” I think you need to be aware of these things as a supervisor, and to channel your information into constructive accomplishment.

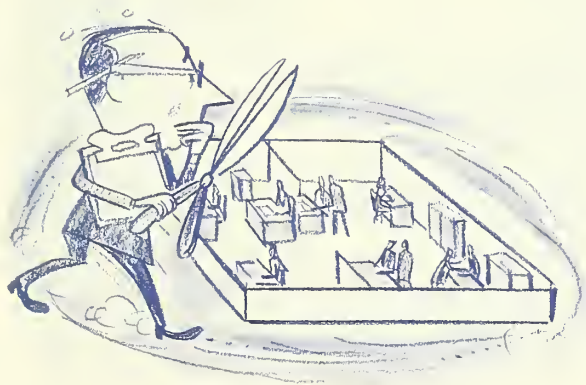
The President has stressed cost reduction as a way to put a sharp focus on the need for action. He wants us, as Government employees (and taxpayers

too), to make sure we have a tight rein on costs. The Government has a big and important role to play here and around the world. There is a limit to our ability to finance these activities with new tax revenues. So we must, in every way possible, make sure that we are spending only what we need to accomplish objectives—and no more! We must know what our objectives are—in real world, current terms.

The President has asked us to regularly question how we do our jobs—to ask is there a better, less costly way? Do we have to do the job at all? Is this program outmoded? Have we accomplished about all we're going to with this or that pet project?

What the President and the Secretary of Agriculture are asking you, as their lieutenant on the line to do, is take action to make cost reduction meaningful where the work is done—at the desk, in the laboratory, and at all the other worksites in the Department of Agriculture. Remember what Parkinson and others have said about the embellishment of jobs? If you as a supervisor can make cost consciousness a way of life among your employees, you can strip jobs to essentials and parlay bits and pieces of time saved into dollar savings—savings that can be diverted to other pressing work in your unit or your fellow supervisor's unit. This latter thought is the “larger view”—think about this as a taxpayer!

In this paper we will suggest some *Tips* to help you.



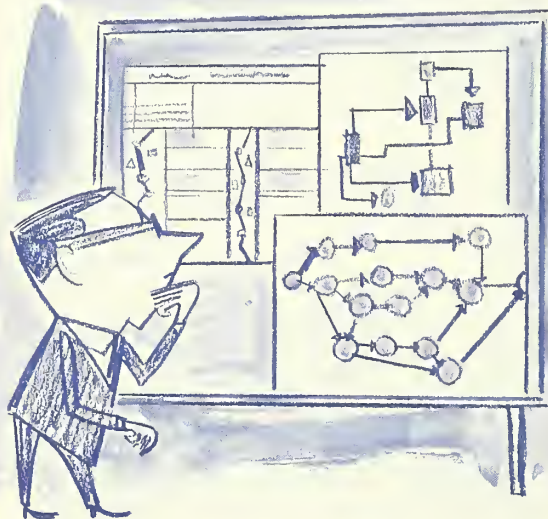
Some “How-to-do-it” Ideas on Cost Cutting

Here are some “nuts and bolts” methods you can use to start your own “homegrown” cost reduction program. You should find some useful ideas and

techniques among them. Not all of them will apply “as is.” Depending upon the size of your unit and the kind of work performed, you will have to do some adapting, modifying, or combining of techniques. But, give it a try. Remember too, that you can get help from your administrative management people. Or, get a good, *current* book on management from your library. One suggestion is a book published by the American Management Association, Inc. It's called “Improving Individual Productivity,” by John D. Staley and Irving A. Delloff. Many of the techniques described very briefly in this “Tips” are set forth in detail by Messrs. Staley and Delloff with real life applications that are very useful. You will, I'm sure, come up with techniques of your own. I would welcome hearing from you on this score—either about some other method you have found effective or about results obtained from some of the ideas presented here.

The techniques are listed more or less in order of their degree of “sophistication.”

The first part of each description tells briefly what the method is. The second part tells how it can be used to identify cost reduction possibilities in your unit.



1. **WORK SIMPLIFICATION:** Work simplification is a *systematic* approach for supervisors to use to cut procedural costs in their organizations. Six

basic “tools” or techniques most often used in a work simplification plan are:

- a. Task Lists
- b. Activity Lists
- c. Work Distribution Charts
- d. Flow Process Charts
- e. Work Counts
- f. Layout Studies

Each of these “tools” is described later (see 1.a. through 1.f.) Help is also available from your agency management office. The Agricultural Research Service’s Operations Analysis and Systems Development Staff has published an excellent “Work Simplification Guide.” The booklet contains many helpful cost-cutting hints in addition to making reference to several forms that are available as working tools. The Agricultural Stabilization and Conservation Service has a somewhat similar guide called “Simplification and Improvement of County Office Operations” (ASCS Guide No. 8).

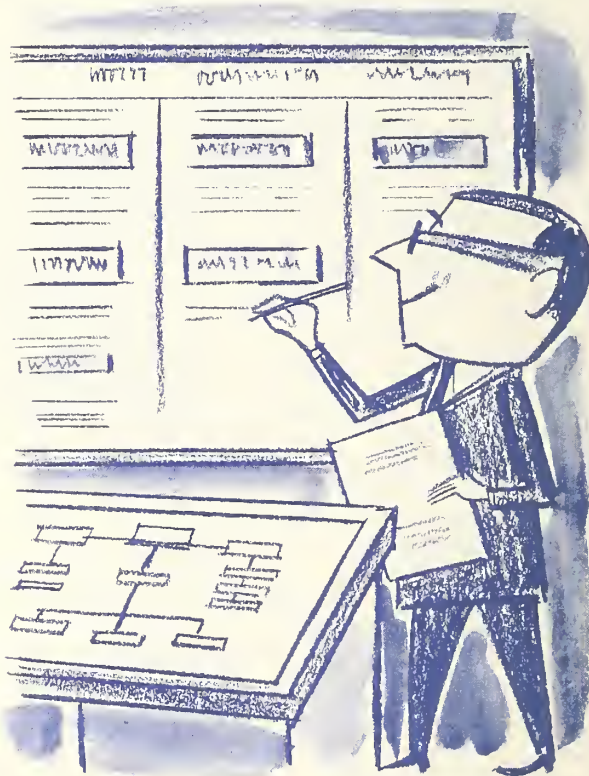
Use: A work simplification approach will enable you to gather facts quickly, organize them (usually in simple chart form), interpret them and take action to improve work performance, redistribute work, and cut costs.



1.a. **TASK LISTS:** These are lists of all tasks performed by each employee in a unit and the hours spent performing each task. Preparation of individual task lists is the first step in work simplification. A task list should be prepared by each employee in your unit. You, of course, will have to “pave the way” from the employee relations angle! Reassurance is a must—you’re not out to “chop heads off”—collectively you’re looking for a better way.

Task lists are transferred by you to a work distribution chart (see 1.c.) for analysis alongside an activity list (see 1.b.)

Use: Task lists provide information on what each employee *actually* does and how long it takes him to do it. When first prepared it may not coincide with what the formal job description says an employee should be doing. *Later*, it can be used to update the official job description.



1.b. **ACTIVITY LIST:** This is a list of the major activities performed by your unit. All activities are described in brief written statements. They describe *what* your organization does—its objective or objectives.

Use: The activity list is used in constructing a work distribution chart (see l.c.) You ask yourself: What does my organization do? As with a task list it may not agree exactly with what the formal organization chart says your unit is supposed to be doing. It should be used later, however, to write an accurate description for inclusion in formal organization charts.

You use your activity list to group tasks performed by each person in your unit under the appropriate activity. Time factors are also shown (taken from task lists).

WORK DISTRIBUTION CHART			
	HOURS		HOURS
INTERVIEW	3 1/2	CLERK	7 1/2
=====	3	=====	1/2
=====	47 1/2	=====	6
MAINT	38	=====	4 1/2
=====		=====	5
=====	1	=====	1
=====	43	=====	
=====	8	=====	
=====	52	=====	
TOTAL	137 1/2		21 1/2

l.c. WORK DISTRIBUTION CHART: This is a simple tabulation in chart form of the various tasks performed by the individuals in your organization. Tasks are classified in accordance with your unit's major activities. The easiest way to do this is with a "spread sheet." List activities (from your activity

list) in order of importance down the left side of your sheet. In a series of columns across the top of your sheet, show employee job titles and hours alternately. From each employee's task list you can briefly describe what each does toward the accomplishment of a given activity. Enter the amount of time spent on each. Base time factors on a 40-hour week. Don't forget a horizontal and vertical column for the hourly totals by employee and activity.

Use: You now have a "tool" to determine what work is being done in your unit, who is doing it, and how much time is spent doing what. It's a simple matter to convert this to how much it all costs. Your work distribution chart will help provide answers to the following questions:

(1) *What Activities Take The Most Time?*

How much time is spent on each; what is the contribution of each employee? Is each *really* contributing?

(2) *Is There Any Misdirected Effort?*

Is your unit spending too much time on relatively unimportant activities or work not absolutely necessary to accomplish objectives? Money spent on misdirected effort is money wasted.

(3) *Are Skills Being Used Properly?*

Is everyone doing the thing he can do best or are special skills and abilities going to waste? Sometimes you will find "experts" you didn't know you had!

(4) *Are Your Employees Doing Too Many Unrelated Tasks?*

Do you hamper efficiency and enthusiasm and breed fatigue by giving employees unrelated tasks? Too many unrelated tasks frequently increase errors. This is costly.

(5) *Are Tasks Spread Too Thinly?*

Is there needless interruption, inconsistency, buck-passing and changeover time because too many employees are doing the same task?

(6) *Is Work Distributed Evenly?*

Is there too great a workload on one employee — not enough on another?

FLOW PROCESS CHART									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



1.e. WORK COUNT: A work count is a technique for determining the effect of the volume of operations on the methods and procedures under study. You actually count units of work produced in relation to a time factor. You can do this on a random sample basis if you are involved in a large volume of small units or pieces of work.

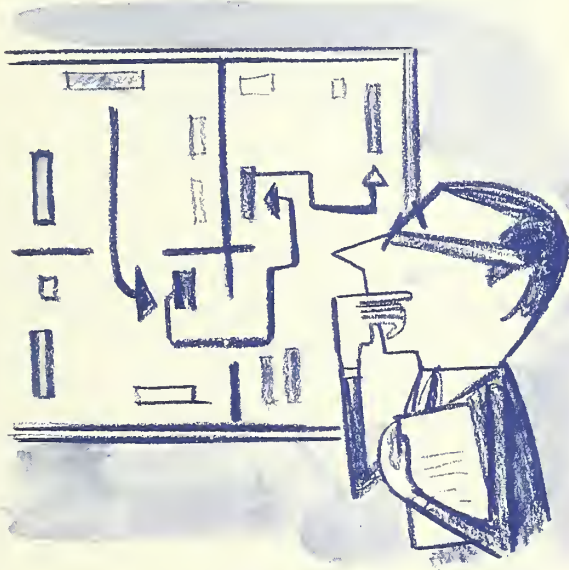
Use: In looking for ways to cut costs, a work count can help you:

1.d. FLOW PROCESS CHART: A flow process chart is a graphic or visual presentation of steps in a procedure, and includes basic data such as distance traveled, quantities processed, and time required.

Use: Flow process charting can contribute to the analysis of procedures on the following occasions:

- (1) When a major change of personnel, procedures, or volume of work is taking place.
 - (2) When a procedural problem is taking place.
 - (3) When making a periodic review of operating methods.
 - (4) When establishing a new organizational unit.
 - (5) When the present procedure appears to be too costly and you are looking for alternatives.
- (1) *Schedule Work:* Every step in a process does not require the same amount of time, effort, and skill. By making a work count you can determine how long each step takes in relation to other steps. Then adjust your work assignments to fit actual conditions. You can often find time and resources to divert to more difficult processes or backlogs in this way.
 - (2) *Relate Tasks:* When your work distribution chart (1.c.) shows several employees performing unrelated tasks, analyze and identify the tasks with a work count. See if you can combine like tasks. It is generally more efficient to do so.
 - (3) *Measure the Value of a Step:* Sometimes equal time and manpower are spent on a step which is relatively unimportant—or which produces few results. When you make a work count, it will help you to see if a step is worthwhile.

- (4) *Divide Work:* You may be applying to ALL work, a procedure which is required for only PART of the work! A work count can identify the kind of action required by various types of work. Sort out exceptions for special treatment.
- (5) *Spot Bottlenecks:* Long "hold times" on your flow process chart (l.d.) may mean a bottleneck! Count the number of units passing that point or count the backlog piled up on the desk. Then make adjustments to break the bottleneck.
- (6) *Prove Personnel Needs:* When increased work volume threatens you with backlogs and bottlenecks, use a work count. A work count helps you back personnel estimates with facts and figures.
- (7) *To Stimulate Interest:* Employees are interested in their accomplishments in relation to that of others. A work count can generate time saving competition among employees. Don't push this to the point of sacrificing quality though.



1.f. **LAYOUT STUDIES:** A layout study is a technique for analyzing the physical location where work is performed. Its purpose is to establish relationships between the location of work facilities and the best work methods. Templates are available from administrative services offices for making layout studies. It's amazing what you can do with plain old pencil and paper, though!

Use: Layout studies can help:

- (1) Get rid of costly detours and backtracking.
- (2) Cut down on physical movement; improve handling methods.
- (3) Stop unnecessary shuttling of papers from desk to desk and file to file.
- (4) Improve working conditions.
- (5) Cut down on waste and poor utilization of space and equipment.



2. **SAMPLE QUALITY CONTROL:** This is the control of quality by sampling so that work will always meet an acceptable level of quality.

Use: Sample quality control can be used when:

- (1) Inspection of *all* work cannot be made because it would be too costly.
- (2) To help pinpoint trouble areas in work quality at the time and point of occurrence.



3. **VISUAL CONTROL CHART:** This is a wall chart that presents, in graphic form, the essential information required to control an operation. Two basic elements are (1) a time scale, and (2) an identification of the elements to be controlled.

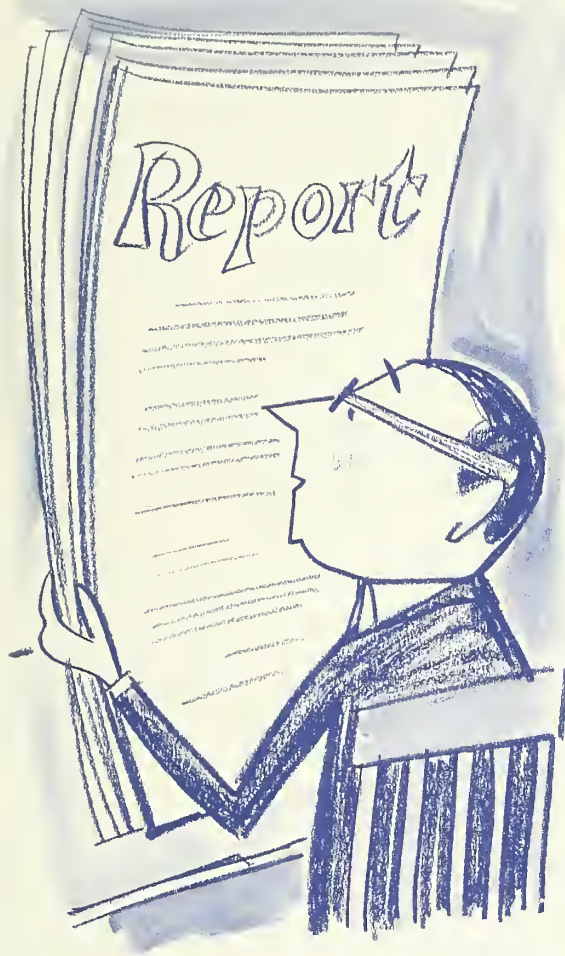
Use: By having a graphic picture of your operations at a glance, you can spot trouble areas before they occur. You can keep track of the *cost of time*. Visual charts are particularly good in controlling the progress of projects that have to go through various departments, steps or operations on a time schedule. Some of the most effective charts are “homemade.” There are commercial devices on the market also — but they cost money!



4. **FORMS ANALYSIS:** Analyze the forms you use to determine *what* should go on them, how the data are used, by whom, etc. Forms analysis is really a specialized kind of work simplification. Help is available from your administrative services or management office. A good do-it-yourself reference is called “Simplifying Forms.” It was developed by the National Archives and Records Service, General Services Administration, Washington, D. C.

Use: Forms analysis can be used to:

- a. Eliminate forms;
 - (1) If the information is not needed,
 - (2) If another information source is available,
 - (3) If the cost of securing information exceeds its worth.
- b. Create or redesign forms in the simplest format possible.

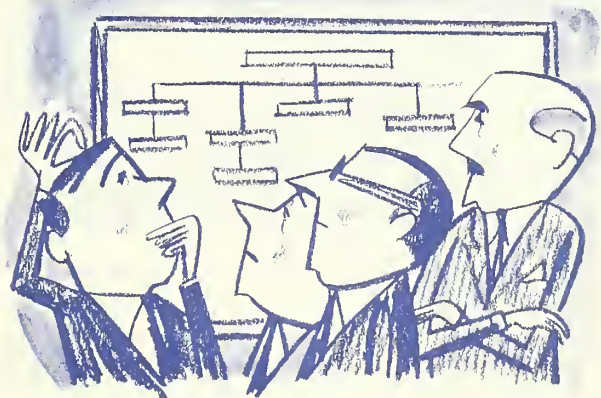


6. MANAGEMENT ANALYSIS: This is the application of systematic methods and techniques to solve management problems and to design, test, and install improved ways of doing work. Supervisors often call on management analysis specialists to help them with studies of this type. However, "doing-it-yourself" is often very effective.

Use: Management analysis should involve the continuous study of objectives, policies, information systems, procedures, methods, and costs. Once facts pertaining to current operations are gathered and analyzed, they can be used to develop less costly, more efficient alternatives.

5. REPORTS CONTROL: A careful control over reports is essential in any organization. They tend to multiply and become "embellished." This leads to unnecessarily high costs of preparation and analysis. Many of these pitfalls can be avoided, however. The USDA's Office of Management Improvement, Washington, D. C., has a very good Reports Management Handbook on the subject. It contains a wealth of do-it-yourself ideas. Write for a copy. Ask for P&O Handbook No. 1, June 1964.

Use: A reports control program will help you review existing, as well as proposed reports. In a given organization, reports will usually be closely related from the standpoint of purpose and content. They should be constantly analyzed and challenged for possible elimination, combination, rearrangement, simplification, or cost reduction.



7. ORGANIZATIONAL ANALYSIS: Organizational analysis is related to management analysis — but the focus is on the purposes and composition of an organization, including its structure, distribution of functions and responsibilities, delegations of

authority, and general workability of internal and external relationships. Like management analysis you can either “do-it-yourself” or call in the experts. Don’t overlook the value of a third party point-of-view!

Use: Organizational analysis can help:

- a. Find the optimum division of work to effectively accomplish program objectives with the least resources (personnel, materials, equipment and money).
- b. Establish a continuing control over unnecessary organization growth. (Remember Parkinson!)
- c. Determine what functions are being performed and who is performing them. Then the question can be asked: Are all these functions necessary? Are they worth their cost? Can they be done cheaper?

In a small unit, organizational analysis is really nothing but work simplification (see 1.a-f.)

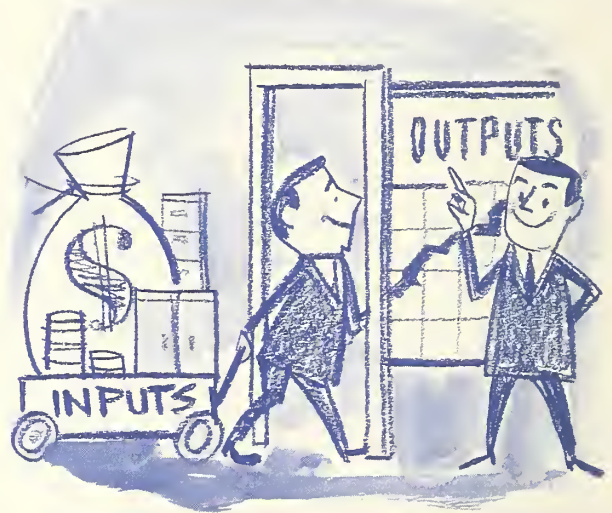


8. WORK MEASUREMENT: Work measurement is one of the most effective tools for determining and controlling manpower costs. Work measurement relates the time credited by work output standards, to the time expended performing tasks. The process expresses activity in measurable terms. The result permits the conversion of workload to manpower resources required.

Use: Some uses for work measurement information are:

- a. Determine minimum staffing needs;
- b. Encourage optimum employee effort;
- c. Provide the basis for performance comparisons;
- d. Establish economical work schedules;
- e. Provide factual data to support manpower costs;
- f. Point up areas in need of further study and analysis;
- g. Provide employees and supervisors with an objective guide as to what is expected.
- h. Identify other possible cost reductions (more efficient methods, etc.)

You will probably need some specialized assistance to develop a work measurement system in your organization. The USDA’s Office of Management Improvement is currently offering assistance to agencies and encouraging the expansion and improvement of work measurement systems.



9. PRODUCTIVITY MEASUREMENT: This is a way of expressing the efficiency with which an organization converts available resources (inputs) into products or services (outputs). The measurement is usually expressed in terms of index numbers.

The President, the Bureau of the Budget, and others who influence the allocation of resources to various Government organizations have asked for evidence of productivity gains in Federal agencies. The most convincing evidence of increased efficiency is through the development and use of carefully constructed productivity indexes.

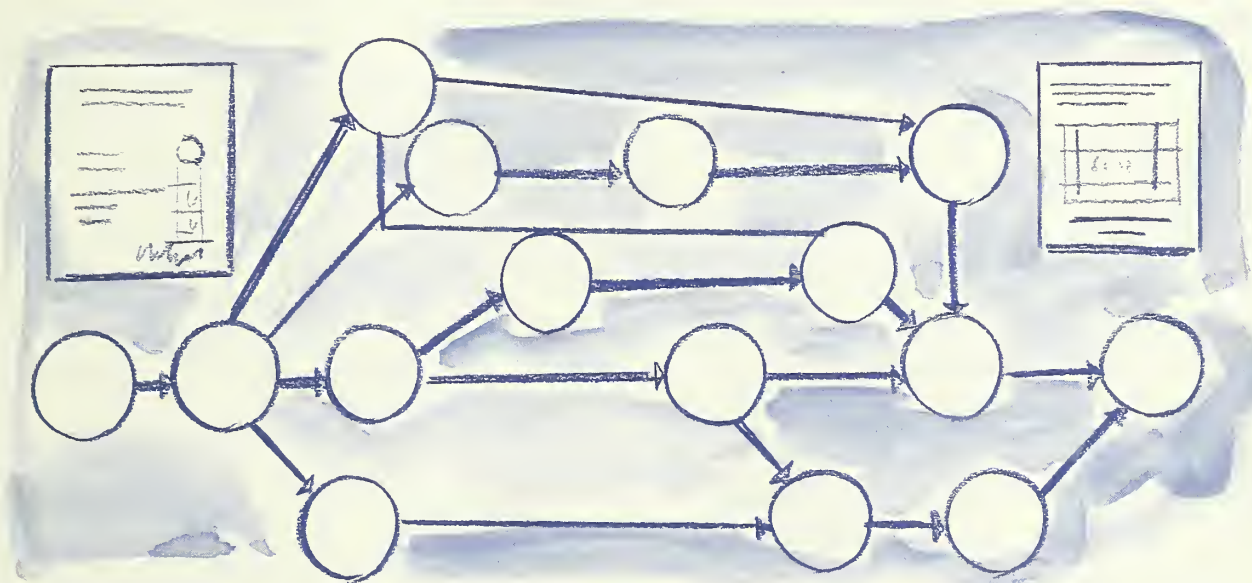
Use: Productivity measurement is used for the following purposes:

- a. To show the aggregate effect of operations improvements in larger organizations;
- b. To support requests for funds and people;
- c. To evaluate the overall effect of actual or proposed changes in input mixes (e.g., automated

vs. manual operations; contract work vs. force account; changes in employee grade structure).

- d. To appraise internal management effectiveness by comparing progress over a period of time as well as between similar organizations.

As with a work measurement scheme for your organization, you will probably need some outside help from your agency management experts to draw up a productivity measurement system. Don't let this inhibit you though! There is a book complete with case studies put out by the Bureau of the Budget that you can use to "scout" the subject on your own. Its title is "Measuring Productivity of Federal Government Organizations." You can get it from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Cost: \$1.25.



10. PERT: PERT (Program Evaluation Review Technique) is an advanced concept of a flow chart. You've probably heard about it. It's a diagram (network) of steps necessary to accomplish a given objective. It graphically shows time relationships between the basic tasks involved in a program or project.

Use: PERT is generally used for detailed planning and control of project type efforts. In this respect PERT:

- a. Assures a manager that detailed planning is done;
- b. Enables management to pre-test its decisions;
- c. Provides for better resource utilization;
- d. Produces and supports progress reports; and
- e. Pinpoints responsibility for accomplishing each task.

The technique received considerable publicity when it was used to plan and manage the Navy's Polaris program. Don't let this run you off! There are simplified versions and much literature on the subject. As a starter try "How to Plan and Control With PERT," by Robert W. Miller. This appeared as an article in the "Harvard Business Review," March-April, 1962. The Critical Path Method is related to PERT. This too was described in a Harvard Business Review article, "The ABC's of the Critical Path Method," September-October, 1963, by Levy, Thompson and Wiest. This last article contains a down-to-earth example of how the method can be used to control the steps in building a house in the most economical way. It's just a short jump from an application of this type to some of our USDA-type projects. Try it for "size." If it's not for you—go back to work simplification!

Conclusion:

These last mentioned techniques may be too elaborate for many everyday cost reduction efforts. If so, go back to the beginning. Try plain old work simplification. Or better still, draw from any one or several of the techniques discussed. The main thing in cost reduction is concerted action. *The way to begin is begin! Get involved!* If we have challenged you to do that, we will have accomplished our purpose. Good luck and good dollar hunting—I'll be looking for the results in future cost reduction reports from your agency!

